UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,507	01/02/2002	Mathilde Benveniste	2000-0611 CIP	8744

				EXAMINER
26652	7590	06/28/2005		TON, DANG T

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ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	**Applicant(s)**
		10/032,507	BENVENISTE, MATHILDE
Office Action Summary		**Examiner**	**Art Unit**	
		DANG T. TON	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22, 25-41 and 44-97* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,16-22, 25-41, 44-65, and 72-80* is/are rejected.

7)☒ Claim(s) *2,4-15, 66-71 and 81-97* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1,3,26,28,35,39,41,44,45,50,64,65,37,47; and 49 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 9, 11, 39, 41, 48, 52, 54, 57, 58, 64, 84, 85, 50, 60 and 62, respectively of copending Application No. 09/985,257. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claims 1,3,26,28,35,39,41,44,45,50,64,65,37,47, and 49 are identical to the claims 9, 11, 39, 41,48 ,52 ,54 ,57 ,58 ,64, 84, 85,50,60,and 62, respectively, of copending Application No. 09/985,257.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 16-22,25,27,29,30-34,36,38,40,46,48,51-63,72-80, and
83 are provisionally rejected under the judicially created
doctrine of obviousness-type double patenting as being
unpatentable over claims 9, 33, 36, 38, 40,42, 44,46,47,49,
53,59,61,67-83,86,88-95, respectively of copending Application
No. 09/985,257 Although the conflicting claims are not
identical, they are not patentably distinct from each other
because.

The claims 9,33,36,38,40,42,44,46,47,49,53,59,61,67-
83,86,88-95 of the copending application 09/985,257 discloses a
method for a distributed medium access protocol that schedules
transmission of different types of packets on a channel based on
a service quality specification for each type of packet,
comprising the steps of:
determining at a plurality of nodes in the access network, an
urgency class of pending packets according to a scheduling
algorithm; and transmitting pending packets in a given urgency
class before transmitting packets of a lower urgency
class ;

remembering the number of transmission attempts by a node

for the last transmission of same node;   estimating from the

number of transmission attempts the current congestion

experienced;   and adjusting a backoff counter to current

congestion levels to provide a dispersion of packet

traffic bursts;

determining at a plurality of nodes in the access network, an

urgency class of pending packets according to a scheduling

algorithm;   using class-differentiated arbitration times, as

idle time intervals required before transmission is attempted

following a busy period on the medium;   and assigning

shorter arbitration times to higher urgency classes;

differentiating packets into additional urgency classes for

packets assigned the same arbitration time;   and using different

contention resolution mechanisms, thus yielding hybrid packet

prioritization;

the arbitration times of two different urgency classes being at

least equal to an arbitration-time increment necessary for a

station to discern that another station has seized a channel;

adjusting backoff probability functions in real time based on

congestion estimates derived from a number of re-transmissions

attempted by a node;

adjusting backoff probability functions in real time based on congestion estimates derived from a number of re-transmissions attempted by each of its neighbor nodes;

adjusting backoff probability functions in real time based on class-specific congestion estimates derived from a number of re-transmissions attempted by a node;

adjusting backoff probability functions in real time based on class-specific congestion estimates derived from a number of re-transmissions attempted by each of its neighbor nodes;

adjusting backoff probability functions in real time based on congestion estimates derived from a number of re-transmissions attempted by a node;

adjusting backoff probability functions in real time at a node based on congestion estimates derived from the time spent by packets waiting for transmission;

adjusting backoff probability functions in real time at a node based on congestion estimates derived from the time spent by packets waiting for transmission at each of its neighbor nodes;

adjusting backoff probability functions in real time at a node based on class-specific congestion estimates derived from the time spent by packets of different classes waiting for transmission at each of its neighbor nodes;

further differentiating packets into urgency classes based on

probability density functions of backoff counters whose

superposition yields a uniform composite density function, thus

achieving efficient dispersion of contending stations' backoff

time;

further differentiating packets into urgency classes based on

different persistence probabilities, by which permission is

granted for transmission, for different packets that are

assigned the same urgency arbitration time;

determining in a first wireless station a first urgency class

of data having a low QoS priority;

assigning a first class-differentiated urgency arbitration time

to the data having a lower QoS priority; determining in a

second wireless station a second urgency class of data having a

high QoS priority; assigning a second class-differentiated

urgency arbitration time shorter than the first time, to

the data having a higher QoS priority; and transmitting from

the second wireless station pending packets in the second

urgency class before transmitting from the first wireless

station pending packets in the first urgency class;

the urgency classes each have a corresponding urgency

arbitration time that must expire before starting a random

backoff interval for packets assigned to that urgency class;

assigning a longer urgency arbitration time to file transfer

data with a lower QoS priority;   and

assigning a shorter urgency arbitration time to voice and video

data with a higher QoS priority;

the random backoff interval is calculated based on a contention

window range which has an initial lower value and an initial

upper value, which are functions of the urgency class;

the random backoff interval is selected randomly from a

statistical distribution, whose mean and variance are set

adaptively in response to an observed traffic intensity;

differentiating between different urgency class transmissions

with class-specific urgency arbitration times;

differentiating between different urgency class transmissions

with class-specific parameters of the probability distribution

used to generate random backoff times and class-specific backoff

retry adjustment functions;

differentiating between different urgency class transmissions

with class-specific packet age limits;

differentiating between different urgency class transmissions

with a persistence factor, Pf.sub.i, that is different for each

class , which is used to multiply a backoff window from

which backoff counters will be drawn randomly upon transmission

retrial;

differentiating between different urgency class transmissions

with a new backoff range determined by traffic congestion

estimates;

the congestion estimates are derived from data that include

feedback on success or failure of a transmission attempt;

the congestion estimates are derived from data that include

feedback on a number of re-transmissions attempted by a node;

the congestion estimates are derived from data that include

feedback on a number of re-transmissions attempted by neighbor

nodes;

the congestion estimates are derived from data that include

feedback on age of retrials of transmissions attempted;

the congestion estimates are derived from data that include

feedback on attempted transmissions provided in reservation

messages;

the congestion estimates are derived from data that include

feedback on attempted transmissions provided in request to send

and clear to send messages;

the congestion estimates are derived from data that include

feedback on attempted transmissions provided in headers of

transmitted packets;

employing a backoff countdown procedure for random channel

access;   monitoring the traffic continuously and providing

feedback to the MAC sublayer of contending nodes;   and adjusting

the parameters of a random distribution from which the backoff

counter is drawn upon initiation of a transmission attempt

for each of a plurality of contending nodes to reflect current

congestion levels;

which further comprises: adjusting a backoff counter of each of

a plurality of backlogged nodes to reflect current contention

levels in time intervals shorter than required for the

completion of a transmission attempt;   and adjusting such

backoff counters in a way that enables older packets to be

transmitted before newer ones with high probability, thus

minimizing the latency jitter;

which further comprises: obtaining traffic intensity measurements continuously and providing feedback to the MAC sublayer of contending nodes;

which further comprises: obtaining feedback on the success status of transmissions and channel idle time continuously and providing such feedback to the MAC sublayer of contending nodes;

which further comprises: employing feedback information to estimate the expected number of backlogged nodes; and using such estimate for the purpose of backoff-related adjustments; employing feedback information to estimate the expected number of backlogged nodes; and using such estimate for the purpose of backoff-related adjustments;

employing a wireless channel; and performing the monitoring of the channel at the access port;

employing a wireless channel; and performing the monitoring of the channel at each of the contending nodes;

determining system-wide adjustments at the access port; and supplying such adjustments to all nodes; and

which further comprises: adjusting such backoff counter so that the relative ordering is preserved.

NOTE; See 9,33,36,38,40,42,44,46,47,49,53,59,61,67-83,86,88-95 of the copending application.

For Claims 25,27,29,30-34,36,38,40,46,48,51-63,72-80, and 83 ,
applicant's claims merely broaden the scope of copending
application 09/985,257 claims 33,36,38,40,42,44,
46,47, 49,53,59,61,67-83,86,88-95 of the copending application
by eliminating the terms " following a busy period on the
medium " from claims 31 and 38 of the copending application; "
parameters" from claim 86; and " priority" from the claim 67 of
the copending application. It has been held that the omission of
an element and its function is an obvious expedient if the
remaining elements perform the same function as before. In re
karlson, 136 USPQ 184 (CCPA). Also note Ex Parte Raine, 168 USPQ
375 (bd. App. 1969); omission of a reference element whose
function is not need would be obvious to one skilled in the art.

For claims 16-22, the claim 9 of the copending application
discloses all the subject matter of the claimed invention with
the exception of applying the method to wireless or cellular, or
TDMA and applying backoff prior to attempting any transmission
in a communications network. However, the applying the method to
wireless or cellular, or TDMA and applying backoff prior to
attempting any transmission are well-known in the art. Thus, it
would have been obvious to the person of ordinary skill in the
art at the time of the invention to use applying the method to

wireless or cellular, or TDMA and applying backoff prior to

attempting any transmission in the claim 9 of the copending

application . Applying the method to wireless or cellular, or

TDMA and applying backoff prior to attempting any transmission

can be implemented into the method/network of claim 9 of the

copending application since it does teach backoff and packets.

The motivation for applying the method to wireless or cellular,

or TDMA and applying backoff prior to attempting any

transmission being that it provides cellular packet and prevents

collision in the network.

This is a _provisional_ obviousness-type double patenting rejection because the
conflicting claims have not in fact been patented.

3. Claims 2,4-15 ,66-71, and 81-97 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

4. Applicant's arguments with respect to claims 1-22,25-41,and 44-97 have

been considered but are moot in view of the new ground(s) of rejection.

5. Any inquiry concerning this communication or earlier communications from

the examiner should be directed to DANG T. TON whose telephone number is 571-272-

3171. The examiner can normally be reached on MON-WED, 5:30 AM-6:00 PM and

Thur 5:30-9:30 A.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, RAO SEEMA can be reached on 571-272-3174. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

D. Ton

DANG TON
PRIMARY EXAMINER